Building 45

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Chapter 11

Building 45

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B.45, partially excavated during the 2004 season, is a large building measuring 7.3m east-west by 7.4m north-south. It is located in the southern part of the excavation area surrounded on the east and west by double walls and to the north side by a double wall with an additional retaining wall, as this side of the building was exposed to an external area (Sp.226). The southern side of the building is at the limit of the excavation area. A large, adjacent building to the west remains unexcavated. Phasing places the building in Level 4040 H (see Chapter 4, Fig. 4.29).

B.45 is formed from two rooms with the main room Sp.228 comprising a raised northern platform F.1409, a long eastern platform F.1408 and platforms F.1410 and F.1411 at the southern side of the building associated with the food-preparation area. An access point was provided from the platforms in the south to a long, narrow room Sp.238 separated from the main area by a mudbrick wall (Fig. 11.1).

The archaeological deposits under the topsoil in the area of B.45 survived as a gradient sloping down west to east leaving the building better preserved on the western side compared to the eastern side. Where the mudbrick walls offered some degree of protection, the survival of the archaeological evidence was better and this was particularly notable by the western wall of Sp.228. The eastern platform F.1408, on the other hand, barely remained, and parts of an underling midden were visible in patches where the platform had been completely eroded away. A post-Neolithic grave cut and a large late pit also truncated the north and southeast parts of B.45. Few artifacts were found in the pit but the small amount of pot, which was probably residual, dated to substantially later than the building ruling out the possibility that the pit was associated with the use or abandonment of B.45 (Fig. 11.2).

Building 45 Phase B: Occupation

(Fig. 11.3 Harris matrix on CD)

The occupation sequence for B.45 remains incompletely excavated but observations on the deposits allow the main sequence of construction events to be reconstructed. Some deposits were also excavated providing evidence for the use of the building in its occupation phase.

Space 228

Oven F.1415

The oven F.1415 (Fig. 11.4) was planned in the original layout of the building. Two thin mudbrick projections extending from the southern external wall were constructed at the same time that the wall was built. The western of these extended 1.02m into Sp.228 and the eastern one had been truncated through erosion and by a large late pit. Despite this, the main part of the oven survived and these two projections demarcated the area of the oven. Multiple oven bases were constructed and used within this superstructure and three eroded burnt bases were excavated. These layers were built directly on top of one another: (10039), sealed by base (10038) and then (10037). Although badly affected by erosion, these bases seem to indicate a square oven base with rounded corners. The shape of the oven also suggests that the third of the oven base rebuilds was larger, extending further southwards. The floors around the oven associated with these oven bases have been lost to erosion and truncation. A micromorphology sample was taken though the floor surfaces around the oven where they had been truncated by the late pit. "*This indicated that in the early phases of the building the floors in front of the oven area were made from thick gray-brown or slightly orange-brown sandy silt loam, with anthropogenic debris. The surfaces of the floors were abraded and irregular, suggesting considerable use of this area, although they were generally kept clean, with only occasional layers of burnt fuel, with charred woody fragments, ash, and gramineae phytoliths, Only one plaster in this sequence was made from whitish sandy silty clay, with charred flecks in contrast to the northern platforms. In the later phases of the building, following a major episode of leveling, the plasters in front of the oven area were more consistently made from gray silt-loam to sandy silt loam plasters, with charred plant and other anthropogenic inclusions. These surfaces were kept very clean, and probably covered in mats, with smoother surfaces and accumulations of thin dust, <0.05mm thick. As in the earlier sequence, only one plaster was made from white sandy silty clay, c.5mm thick, at the end of the use of this area"* (Volume 9 Chapter 7 pp). This floor sequence around the oven was not excavated as work within B.45 was limited to one season and, because of erosion, the latest excavated floor layer did not survive around the oven.

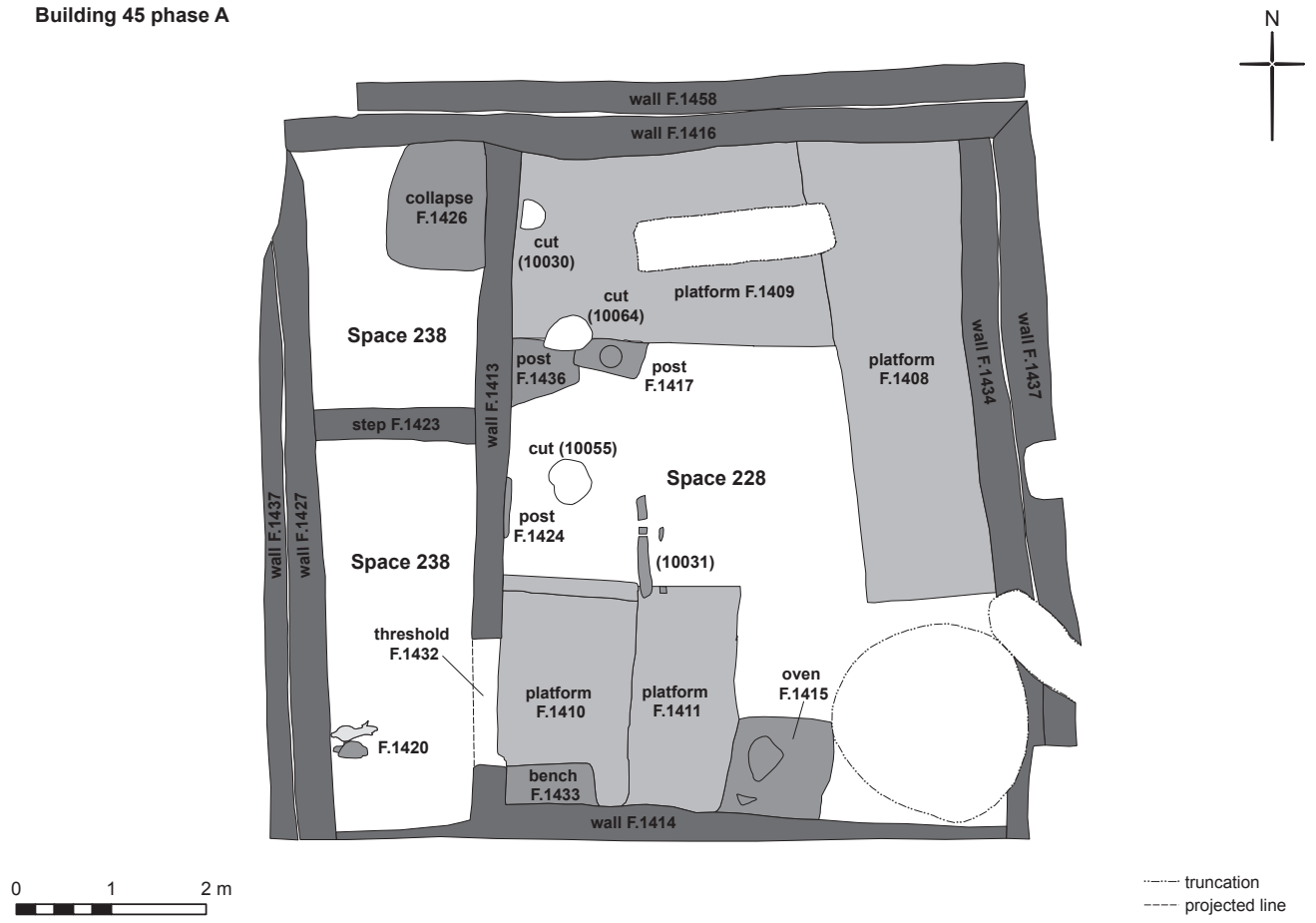

Figure 11.1. *Plan of B.45 in Phase B (Plan by Camilla Mazzucato, Cordelia Hall and David Mackie).*

Platform F.1410

One of the earliest visible features installed in the building is the southwest platform F.1410 and the use of this feature continued through the occupancy of the building with various episodes of replastering. Although the platform was used for a long time it was evidently not present when the building was first constructed since layers of wall plaster were visible behind the platform lining the internal wall F.1413. The final dimensions of the platform were 1.95m north to south and 1.62m east to west after the multiple plaster additions. Where the platform had suffered from erosion in the southeast corner, the method of construction was suggested by the presence of a course of mudbricks aligned north-south along the platform's eastern edge. Presumably the platform was fabricated by extending two lines of mudbricks at right angles from walls F.1414 and F.1413 and infilling the resultant space with looser material. The northern margin of the platform was distinct, forming a higher, more compact rim measuring 0.18m in width. This appears to have been added on to extend to the platform northwards (Fig. 11.5). There is also some evidence that the platform was extended to the east by a similar width, possibly at the same time that the northern extension to the platform was instigated. A second platform F.1411 was added (see below) to the western side of the platform but prior to this platform F.1410 was extended changing its width from 1.44m to 1.62m in the same manner that the northern edge was expanded. The only evidence for this development was a partially visible division underneath the eroded surface of platform F.1411 and it is possible that this related to the construction of the later platform. A patch of burning (10123) formed a temporary hearth on the surface of the platform but this was not excavated because it represented scorching to a plaster surface stratigraphically sealed. Directly above was a concentration of burnt mudbrick (10053) although it is possible that this was related to the destruction of the building and it seems probable that this collapse is unrelated to the scorching of the platform.

Platform F.1411

Prior to the construction of platform F.1411 an un-raised

area existed between the oven and platform F.1410. The construction of the platform was executed in two separate phases. In the first instance the southern area was raised forming a level surface across from platform F.1410 to the oven and extending north of the oven by roughly 1.4m. The only trace of this stage was a vertical plaster lip under the eroded later, larger platform surface. At some point in the building's occupation, it was decided to extend platform F.1411 northwards. This development was undertaken still relatively early in the occupation of the building since numerous replastering episodes were visible along the north part of the western platform edge and the excavated floors in the central area of the room sealed the entire sequence in this southern part of Sp.228. The final plaster, and possibly earlier surfaces, on the sides of the platform had been painted red. No evidence for a similar treatment was found on the surface of the raised area of the platform but, if it were present, it would probably have been lost through erosion. At some point, a hearth had been in use in the northeastern corner of the platform. The actual burnt material that had generated the patch of scorching (10124) on the platform was not present. A raised and plastered area extending from the corner formed by walls F.1433 and F.1413 was probably a heavily eroded bench extending out into the room as far the access-hole linking Sp.228 and Sp.238.

Figure 11.2. *Overhead photograph of B.45 (Photograph by Jason Quinlan).*

Figure 11.4. *Oven F.1415 (Photograph by Elizabeth Tien Ha).*

Eastern platform F.1408

The eastern platform F.1408 had a final width of 1.6m at its northern end compared to 1.34m at its southern end and, abutting the northern external wall F.1416 at one end, extended 4.44m to the south. Only the western edge of the platform survived although it would have originally extended to the eastern external wall. A truncation through the surviving portion provided evidence of the multiple layers used in the platform's use. The last plastering was given unit number (10027) and covered both the platform face and surface. No evidence of paint was found on this layer. A micromorphology sample taken through the west side of the edge of the platform showed that this '*platform had been plastered more frequently than other platforms in the building. The core of the platform was made from crushed building material aggregates that were smoothed over with brown plaster, surfaced with a pale brown plaster and two white finishing coats. The platform had been remoulded at least four times and some were coated with finishing coats <0.02mm thick. The last plaster was resurfaced 3-4 times with very clean finishing coats. The surfaces were kept very clean, and probably covered with soft furnishings or animal skins*' (Volume 9 Chapter 7, PAGE).

Northern platform F.1409

B.45's northern platform F.1409 had been affected by slumping into the centre of the building and the southern edge was poorly defined because of truncation and repairs along its margin. Much of the platform had been removed by a

Figure 11.5. *Platform F.1410 adjacent to access-hole between Sp.228 and Sp.238 with platform F.1411 later added (Photograph by Jason Quinlan).*

post-Neolithic grave cut (10020) (Chapter 32). The area of the platform spanned the 3.2m width of the Sp.228 between wall F.1413 and the eastern platform F.1408 and extended from the northern external wall approximately 2.14m to the south where it abutted pillar F.1417. The later surfaces lipped up against a robbed out feature F.1436. The floor layers that comprised the platform were unexcavated except one (10087), which was a mixed occupation and floor layer that extended from the northwest corner to the platform's southern edge petering out to the west. This produced two proximal sections of fine pressure-flaked obsidian blades that had been left and/or placed there deliberately prior to the building's abandonment/destruction. One is made of Nenezi Dağ obsidian and has clear use-wear (10087.A1), while the other is an East Göllü Dağ product that had been backed and used (10087.A1) (Volume 9 Chapter 21). The pillar F.1417 at the southern edge of platform F.1409 was constructed from a fine orange sandy clay matrix. The base was below the level revealed by the surfaces removed but the lower section exposed had a rectangular cross-section changing to a molded round pillar at a higher level. Some packing (Fig. 11.6) and plaster layers (Fig. 11.7) were added and this '*appears to be a deliberate attempt to change the base of the pillar from a square to rectangular shape*' (US 10098, DE, 29.07.04). The purpose of the pillar and its original height remain unclear. A second feature F.1435 at the southern end of the platform appeared to comprise of a robbed out matrix similar to that used in the construction of pillar F.1417. It is possible that this formed a second, destroyed pillar dividing the northern platform from the central area. The remaining features identified in Sp. 228 were a robbed out feature F.1436, possibly a post retrieval pit and F.1424 an engaged pilaster. This showed as a tall negative feature against wall F.1413 respected by the floor surfaces leaving a gap of 0.64m north to south and 50mm east to west suggesting the feature formed a flat addition against the internal wall.

The central area of Sp.228 was frequently modified towards the end of the occupation of B.45 after the platforms and basic features had been constructed. A number of units representing plaster repairs, occupational material and thin make-up layers covering the central area of Sp.228 were excavated. There was a clear division between the eastern and western sides of the area, defining different activity zones. This boundary was reinforced by a lip (F.1428) in the plaster floors running north to south demarcating the western side from the eastern side (Fig. 11.8). The layers (10118), (10105), (10092), (10077) and (10070) next to the internal wall appear to have been used for dirty activities whilst the floors (10096), (10083), (10082), (10079), (10062) and (10056) east of this line were generally cleaner. Only two of the deposits associated with the dirty floors (10070) and (10105) produced obsidian from the dry sieve, a mere two broken and used pressure-flaked blade fragments, one of East Göllü Dağ obsidian (10070.A1), the other of Nenezi Dağ (10105.A1). The heavy residue samples from these units (10092), (10105) and (10118) added little extra material, with only a couple of broken blades from the 4mm fraction. Perhaps unsurprisingly, the clean floors in the eastern part of Sp.228 (10096), (10083), (10082), (10079), (10062) and (10056) produced no chipped stone whatsoever (Volume 9, Chapter 17). The clean floors sealed the plaster remolding of pillar F.1417.

A small pit (10055) cutting one of the dirty surfaces (10070) "*contained two stone grinders and a worked bone point* (Fig. 11.9). *The position of these artifacts on the base of the cut suggests they may have been placed deliberately*" (US 10054, DE, 18.07.04). The worked bone point is a quartered distal sheep/goat metapodial that had been scraped and smoothed and later resharpened. The tip is significantly rounded and the tool is highly polished, all suggesting that it had been in use for a substantial period of time. Although the pit cut a floor relatively early in the excavated floor sequence, stratigraphically the fill of this pit was directly under the infill and it is therefore possible that it relates to an abandonment activity in the building.

Pit (10045) F.1418 measured 0.28m by 0.3m by 0.31m in depth and been dug to house a complete pot (Fig. 11.10). The facts that the pot had been manufactured with a handle and had a soot-like deposit coating its external surface, suggest

that it had not been specifically made for its final placement in the pit (Fig. 11.11). The pot was deliberately broken, as it was placed in a pit too small to house it whole and the sherds were overlapping and displaced when excavated. The fill of the pot contained an intensively reduced projectile (Fig. 11.12) made of Nenezi Dağ obsidian (10043.x1), although the piece is barely recognizable as such (only by the remnant retouch along one margin and its vaguely ovate outline), having had a number of linear blanks removed from both ends and both faces. "*This piece is of some significance as it provides us with both another example of projectiles being heavily reduced, for symbolic reasons in our opinion, and their inclusion in ritual/magical deposits that appear to mark specific events within the life of a building*" (Volume 9 Chapter 21, PAGE). The heavy residue sample from the pot also produced a small quantity of obsidian, much of which is likely to be background material from general fill, although there is a 25mm long blade fragment of East Göllü Dağ obsidian with use-wear. The animal bone in the fill is highly fragmented and a high proportion of the bone had been heated to high temperatures. The fill, however, also contained unburnt fragments of human skull (see Fig. 11.12) and vertebrae, and it is probable that these were deliberately placed. The botanical remains from the fill are low density and probably, like the animal bone, unrelated to the specific use of the pot. This was an interesting feature whereby human bone was placed in a pot set into a cut truncating the mixed occupation/surface in the central floor area. Both the human bone (because of the small size of the broken fragments) and the obsidian projectile appear to have been kept and moved/used for a long period of time before being finally placed in the pot set into the floor.

Figure 11.6. *Orange sandy clay packing (10100) around core of pillar F.1417 (Photograph by Jason Quinlan).*

Figure 11.7. *Plaster (10098) addition to the base of pillar F.1417 (Photograph by Elizabeth Tien Ha).*

A badly preserved infant skeleton F.1412 was recovered in the dirty area of Sp.228. No clear burial cut was visible for this disturbed skeleton (10033), but it was buried under an extensive packing (10042) layer before the room was resurfaced. Very few bones of the infant were present, although it was not possible to determine if the burial was heavily disturbed by later activity or if only a few bones were interred in the first place.

Close to the western wall dividing Sp.228 from the side room Sp.238, a later floor surface (10032)/(10041), although badly affected by erosion, had once spanned the northern platform to the platforms at the southern end of the room. It appears that this surface represented a substantial transformation: the new surface was approximately 0.2–0.35m above the previous floor surface (10070) and there were areas where the packing (10042) for the later floor was 35mm thick and sealed the cuts (10045) and (10128). This packing layer had been laid down in preparation for a new thick surface (earlier, thin modifications had been made to renew floors as they became worn away). The packing layer (10042) for the floor contained

Figure 11.8. *Difference between the clean and dirty areas of floor in Sp.228 (Photograph by Jason Quinlan).*

a couple of "*exceptional finds* (Fig. 11.13) *and were probably added to the make-up intentionally before the plaster surface of the floor was constructed*" (US 10042, LY, 13.07.04). The first is a 0.1m long, near complete end-scraper 10042.x1 made on a prismatic blade of light brown chert. There is no associated evidence for the manufacture of such high quality percussion technology blades at Çatalhöyük implying that it was imported ready-made. It is also worn on the dorsal ridges and has an overall surface sheen suggesting that the implement had a long life in circulation prior to its inclusion in this deposit. The second piece is a large (84mm by 3.2mm) retouched blade 10042.x2 of East Göllü Dağ obsidian, a product of a non-local percussive technology with heavy use-wear from cutting something of medium to hard resistance such as wood, bone or horn (Volume 9 Chapter 21).

Neither the later floor nor its make-up survived in the eastern side of the room so it is impossible to indicate how far the floor extended. Along the eastern internal wall above the plaster floor (10041) a setting of orange sandy clay (10046) was used to raise a rim of plaster (10047) forming a sub-rectangular lipped setting against the wall. This may have been the base for a robbed-out installation. All of these features had suffered extensively from erosion.

A couple of cuts truncated the latest floor surface (10041) in the main room of B.45. Cut (10030) had been made in the northern platform next to the internal dividing wall. The fill (10029) of the cut contained the bones from two articulated aurochs ankles (distal tibia, astragalus and calcaneus). Both of these groups were from the right side of an animal and therefore belonged to two different animals. Preservation of these bones was very poor in comparison to the rest from the building suggesting that they may have been exposed for some time prior to burial. One astragalus was within the size range of male wild cattle but the other astragalus was too poorly preserved to measure although it is smaller and might be from a female (Russell *et al.* 2004). Another small pit (10064) in the central area of the space contained an obsidian tool 10063.x1 and four broken blades 10063.A1-A4. These five pieces of obsidian embody a remarkable diversity of raw material and technology. The small bifacially retouched projectile (55mm long) was shown by pXRF analysis to be made of East Göllü Dağ obsidian and is made on a relatively thick (32mm) blade that was likely produced by percussion. The very end of the tip is missing, conceivably the result of impact damage from use. Two of the blades were fine, narrow segments (9mm to 10mm wide) from pressure-flaked traditions, one made from East Göllü Dağ obsidian 10063.A3, the other a Nenezi Dağ product (10063.A4). The other two pieces are also very regular in form, again suggesting that they had been manufactured by pressure-flaking, but they were significantly wider indicating that they had been produced by a different technique(s) to that employed to knap the first two.

Figure 11.9. *Group of artifacts placed into the base of small pit (10055) (Photograph by Jason Quinlan).*

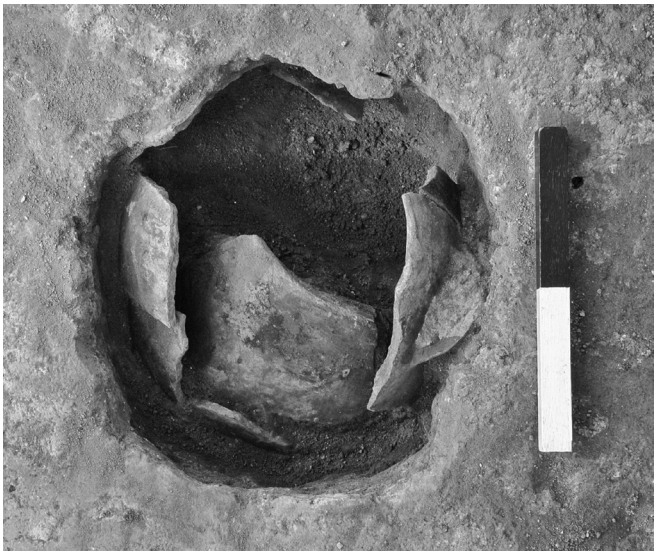

Figure 11.10. *Pit (10045) containing pot (10044) (Photograph by Jason Quinlan).*

As with the point, all of the blades, with the exception of 10063.A4, have clear traces of having been used prior to their burial (Volume 9 Chapter 21). It seems probable that both pits (10030) and (10064) were related to an activity at the abandonment of the building (see below).

Also above the latest floor in Sp.228 was a possible wall feature that had collapsed. Erosion had severely affected the preservation of this feature and its interpretation remained obscure.

Space 238

Side rooms in general underwent less modification during the course of their use than the main rooms and this was clearly evident in B.45. The two spaces of the building were separated from one another by a stepped access-hole (see below) and this meant that no stratigraphic relationship survived which would have allowed the two spaces to be phased with respect to one another. It is only possible to suggest that the earliest layers reached in Sp.238 were earlier than the excavated sequence in Sp.228. The side room ran the length (7.4m) of B.45 but was relatively narrow measuring just 1.6m in width. There was a distinct division between the northern and southern parts of the room's floor defined by a change in floor level. The northern end of Sp.238 was higher than the southern end with a line of mudbricks F.1423 used to form the step. The northern portion formed less than half of the space measuring 3.06m in length. A severe fire had started just north of this division that had baked the surrounding mudbricks.

In the northern section there was only one floor surface ((10093)/(10094)) and this was significantly damaged by fire. The only chipped stone from this unit came from the heavy residue sample ((10093)/(10094)), a relatively low density of material that included a couple of broken Nenezi Dağ pressure-flaked blades from the 4mm fraction (Volume 9 Chapter 21). By the western wall, this floor surface (10093) was better preserved and extended into a long narrow niche

Figure 11.11. *Pot (10044) after conservation (Photograph by Jason Quinlan).*

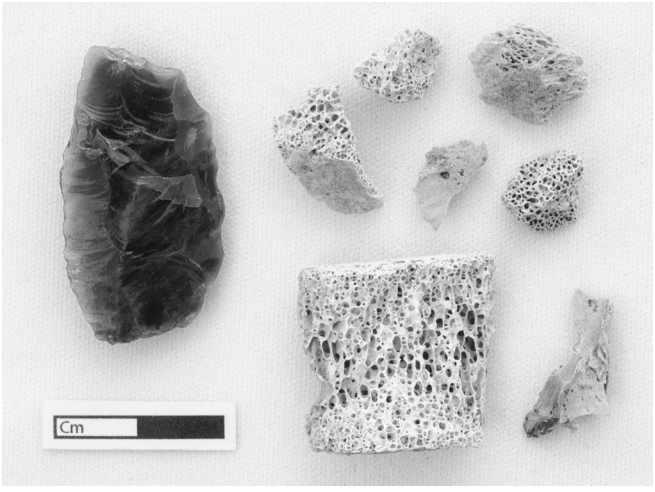

Figure 11.12. *Obsidian core 10043.x1 found in pot with human bone (Photograph by Jason Quinlan).*

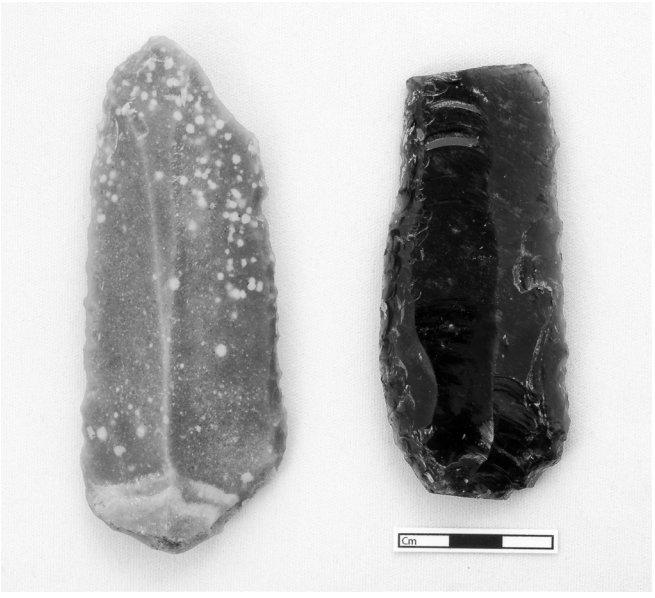

Figure 11.13. *Chipped stone tools 10042.x1 and 10042.x2 intentionally placed in the thick makeup layer (10042) (Photograph by Jason Quinlan).*

F.1429 at floor level which had subsequently been blocked in with mudbrick and mortar. A broken projectile 10095.A1 was found in the fill but, given that it was only half extant, it is more likely to represent part of the general fill rather than a specially interred object. The point was a flat ovate biface made of Nenezi Dağ obsidian and is typologically distinct from all the other projectiles from B.45 (Volume 9 Chapter 21). A large storage bin, comprised of two separate segments, concealed much of the opposite wall.

The burnt make-up ((10086)/(10101)) below the floor surface was excavated producing a large fragment of worked serpentine, possibly a pounder 10086.x1 as well as sheep astragalus 10086.F12 flattened on the dorsal side with the medial projection ground-off. A sheep/goat metatarsal 10086.F42 formed into a point was also recovered from this context and this bone tool was decorated with four transverse incisions opposite three transverse incisions and a diagonal incision on the inner face of the bone where the bone had been split in two between the condyles. Twelve pieces of obsidian were recovered, mostly blades and all but two of which appeared to have been used (Fig. 11.14). Of note are two percussion-knapped and retouched blades of East Göllü Dağ obsidian 10086.A1 and 10086.A6. There was also a correspondingly productive heavy residue sample, with nine pieces from the 4mm fraction, including two pressure-flaked blades of East Göllü Dağ obsidian and a retouched flake of Nenezi Dağ obsidian. There is also the mid section of a 30mm wide burnt and retouched prismatic blade of a brownish fine-grained chert. The piece is conceivably a sickle fragment, but the sheen from long-term use and burning makes it impossible to tell and the implement is a non-local import (Volume 9 Chapter 21). The packing was stratigraphically above the mudbrick (10122) and mortar (10127) used to construct the partition step F.1423 suggesting that it was used to raise the northern section of the room before the floor was laid. It is unsurprising that the fill was burnt in the fire given its intensity (see below) in this part of the room.

The sequence was not fully excavated in the southern section of the space where the floor had been re-plastered more frequently. Perhaps this pattern was related to the intensity of use in the different parts of the space; the northern part of the space would have been particularly dark being at the far end of a long narrow room and seems to have been used mainly for storage. A greater level of activity could have taken place in the southern area resulting in the need for floor replastering. An occupation deposit (10081) was excavated over the floor in this area of the building and contained small fragments of mainly sheep/goat bones some of which were burnt and gnawed. Two bone tools were also recovered from the deposit; these are a first phalanx of an equid 10081.x1 that had been abraded longitudinally and transversely in the middle of the bone. Some of the abrasions run over the edge of the fusion plane, indicating that the epiphysis was intentionally kept with the diaphysis but at times just the diaphysis was worked. The function of the tool is not known. The other tool 10081.F64 is a complete sheep/goat metacarpal that had been polished and abraded probably during its use as a pot/plaster polisher. The botanical sample from this unit is interesting and yielded the residue from the process of dehusking hulled wheat mixed with the seeds of wild plants (Volume 8 Chapter 7). This is comparable to botanical remains from B.77 and further evidence that the cleaning and dehusking of crops took place within buildings (Volume 8 Chapter 7).

The occupation deposit (10081) was above a plaster floor (10106). The earliest deposit reached in the excavation was a

Figure 11.14. *Group of worked bone and obsidian from (10086) (Photograph by Jason Quinlan).*

light brown layer of floor make-up (10107) forming the basis for a plaster floor (10106). This plaster surface did not extend to the southern wall of the space but ended irregularly perhaps suggesting that parts of the surface had been damaged. Above the plastered floor (10106) were six pieces of chipped stone, with an end-scraper on a thick percussion blade of a fine-grained brown chert 10106.A6, plus three used, medial pressure-flaked blades of Nenezi Dağ obsidian. The floor did not extend to the very southern-most part of the space where a mudbrick had been placed. This mudbrick (10117) was not made of the typical material used for mudbricks in B.45 but contained numerous inclusions and had an orange sandy clay similar to that used in features within the building. The shape and size of the brick and the presence of plaster (10119) along one side suggest that it was originally used elsewhere. This brick was not attached to the wall but deliberately placed very close to the middle of the southern wall in Sp.238. The material used in its construction implies that it was not a brick that had collapsed into the space and this was confirmed by the presence of a neonatal baby interred in a small burial cut (F.1431) in the centre of the brick. The baby (10112) lay on its right side in a tightly crouched position.

The floor surface (10106) had also been cut through close by for the interment F.1430 of another neonatal baby (10109) next to the western wall opposite the access-hole. The two neonatal burials were both within the southern part of the room (Fig. 11.15). The baby (10109) had also been placed in a tightly crouched position but on its left side. Neither of the two babies had been buried with any grave goods and no visible traces of phytoliths were present to indicate that they had been interred inside baskets. Further potential burial cuts were visible at the end of the excavation season hinting at the possibility of additional neonatal babies or infants under the earlier, unexcavated floor surfaces in the southern portion of Sp.238.

Burning (see below) in Sp.238 helped preserve a number of details concerning the construction of the access-hole F.1432. The access-hole had been planned when the building had been originally constructed as a gap 1.49m wide was left towards the southern end of internal wall F.1432 except for the three lowest courses which had been left forming a step. "*The access-hole appears to have been supported on both sides by timbers which the wall plaster in Sp.228 would have sealed. The southern of these was burnt* insitu *since charred fragments of wood were found in the area. Also the step of the access-hole probably had a timber beam lying*

Figure 11.15. *Neonate burials F.1430 (10109) [right] and F.1431 (10112) [left] in the southern end of Sp.238 (Photograph by Jason Quinlan).*

across its threshold on the eastern side and the burning of this in the fire caused scorching of the mudbrick" (Diary, LY, 19.07.04). The timber (10125) had probably been laid to protect the mudbrick step from wear as people passed through the access-hole. An isometric illustration and reconstruction drawing of how B.45 during the occupation phase are shown in Figs. 11.16 and 11.17.

Building 45 Phase A: Closure/infilling

Towards the end of the use of the building a fire occurred in the side room. The fire started in Sp.238 damaging the northern part of the room, spread up the walls and set fire to the structural timbers around the access-hole. In Sp.228 the effects of the fire were minimal. There were a couple of groups of finds left from the final occupation or added to the building when it was abandoned (Fig.11.18). The first of these was spatially above the neonatal burial against the western wall of Sp.238. Above the floor was a dismantled cattle bucranium (10057) that had been discarded or, more probably, purposefully left (Fig. 11.19). The cattle bucranium had been set in greenish-gray clay that formed a flat surface on the posterior side of the skull and roughly followed the contours of the skull around the frontal bone to a flat anterior side. The bone itself comprises only the back of the skull and much of the structure of the installation was made from clay. Traces of plaster were visible on the left horn core but this did not extend to cover the clay around the head of the piece. "*The feature was not, however, found in its original location since a small area of infill separated the clay block (10059) from the wall and the skull was facing the wrong direction pointing down the room rather than projecting from the wall. Also there would not have been enough space between the frontal bone and the wall for a complete horn core to be present. It seems that this bucranium was removed from elsewhere and placed in Sp.238 before the room was filled. The horn cores were removed before this happened*" (Diary, LY, 26.07.04). Analysis of the faunal remains shows that there are no traces of horn sheath removal and that the bucranium is that of a mature female aurochs (Russell *et al.* 2004). At the same time that the bucrania had been put in the space, the skull of a wild boar was placed immediately to its north (Fig. 11.20), perhaps reflecting a special event associated with the dismantlement of the bucranium and its placement in Sp.238. The boar skull is comprised of a posterior cranium in articulation with the modified mandible. The skull is in poor condition and only the back of the cranium was found with the rostrum removed prior to the placement of the skull. The mandible is more complete, but its anterior cheek teeth have been deliberately removed. A concentration of phytoliths were found in the area at the back of the mandible and analysis of these shows that the back of the mouth had been packed with wheat and, to a lesser extent, barley husks rather than stems (Twiss

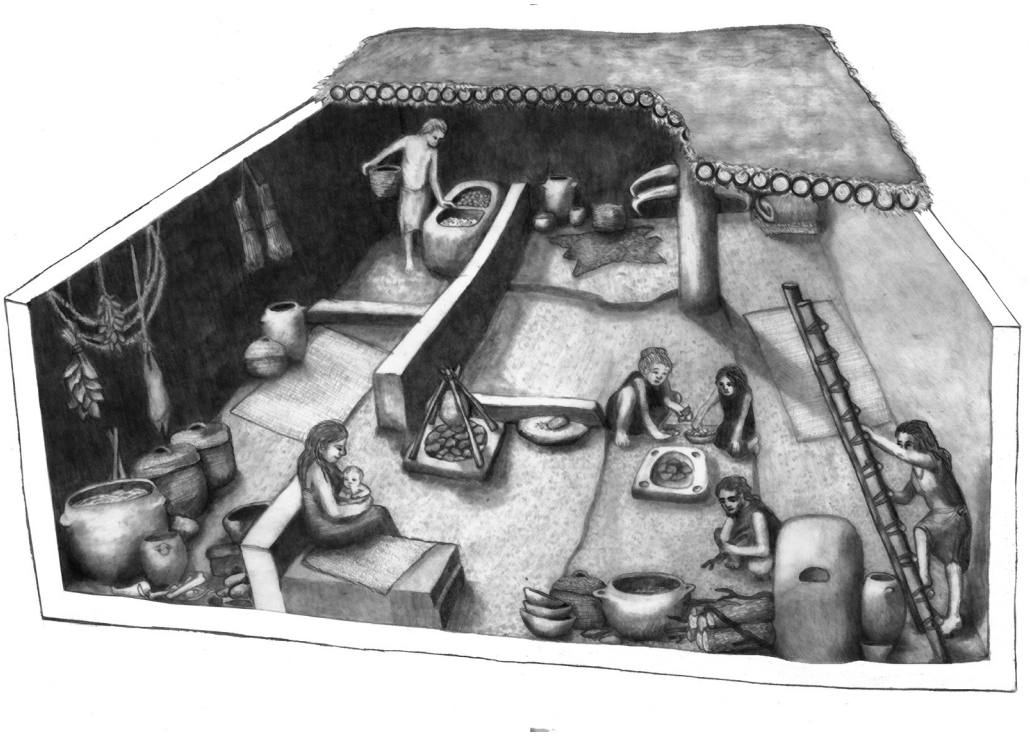

Figure 11.16. *Reconstruction of B.45 (Illustration by Mesa Schumacher).*

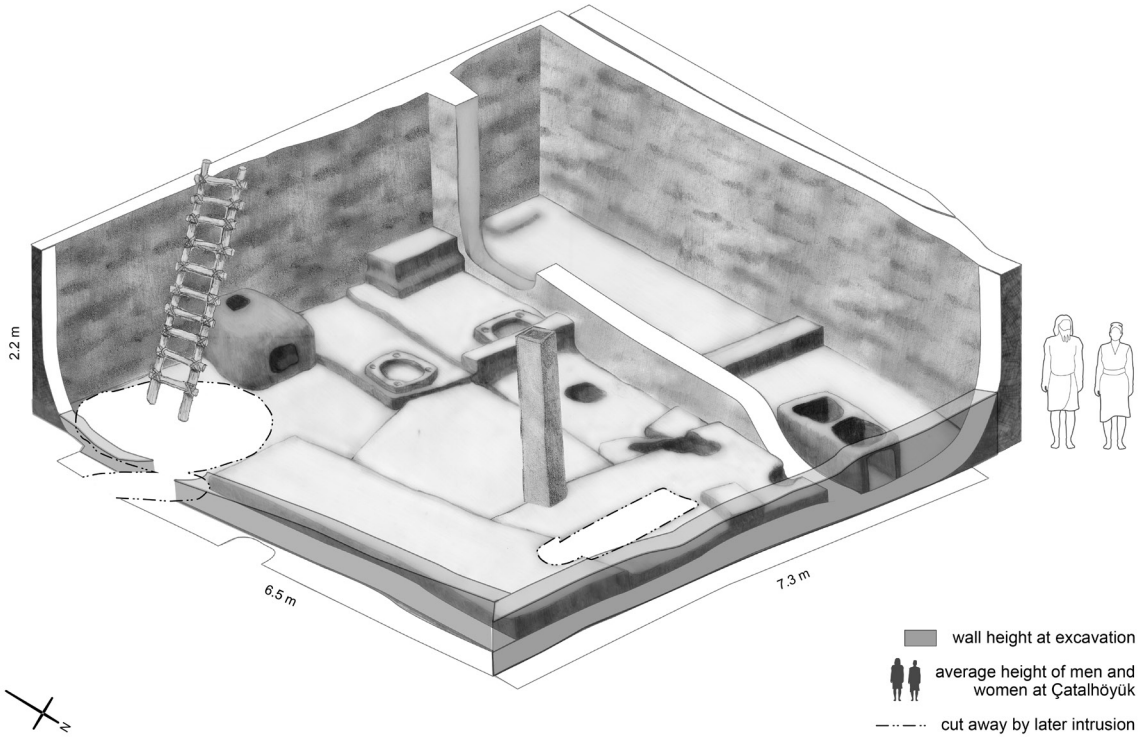

Figure 11.17. *Isometric illustration of B.45 (Illustration by Kathryn Killackey).*

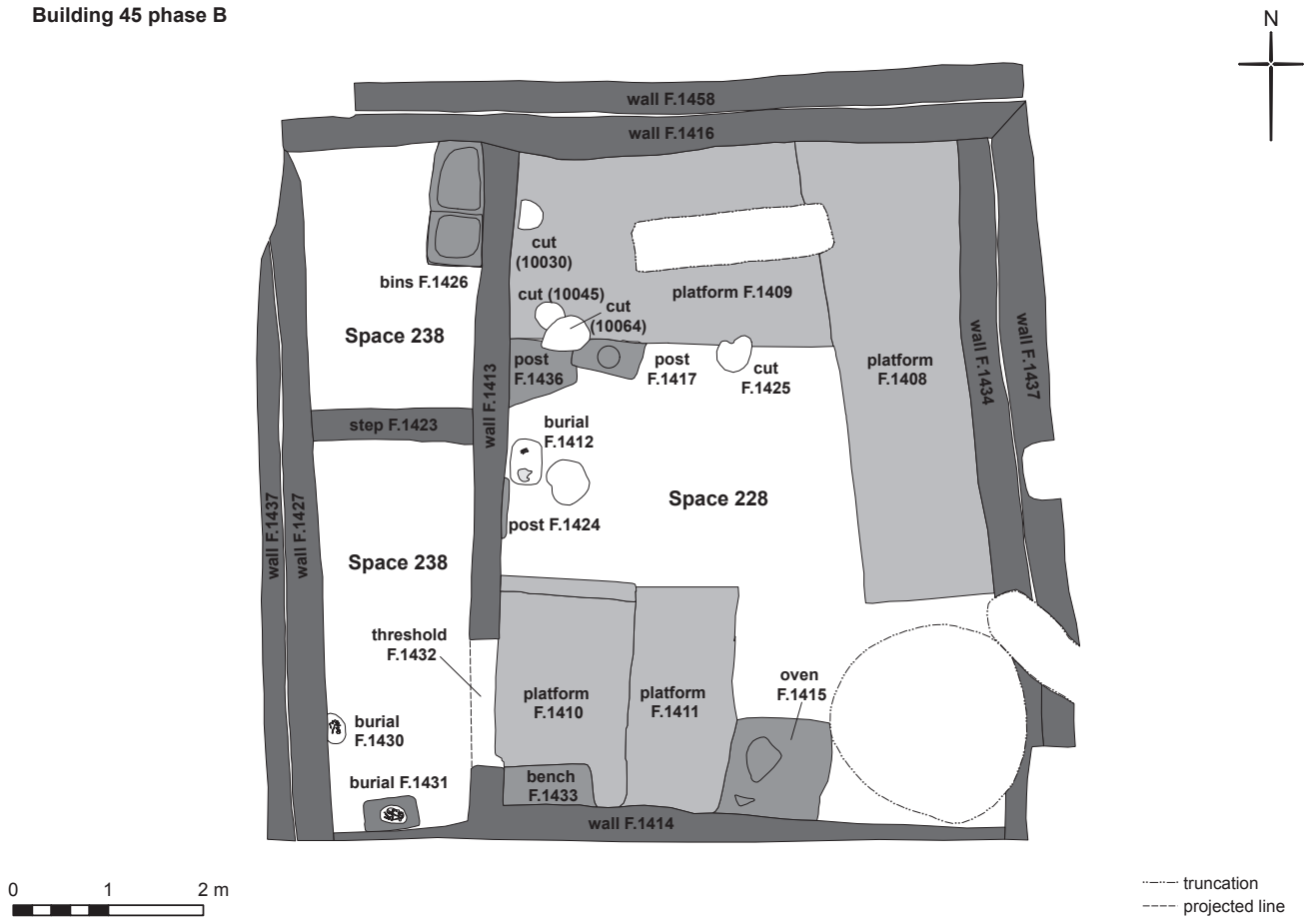

Figure 11.18. *Plan of B.45 in Phase A (Plan by Camilla Mazzucato, Cordelia Hall and David Mackie).*

Figure 11.19. *Bucrania placed next to wall in Sp.238 (Photograph by Valeriano Saucedo III).*

Figure 11.20. *Dismantled aurochs bucrania and boar skull and modified mandible placed next to the wall of Sp.238 opposite the access-hole (Photograph by Jason Quinlan).*

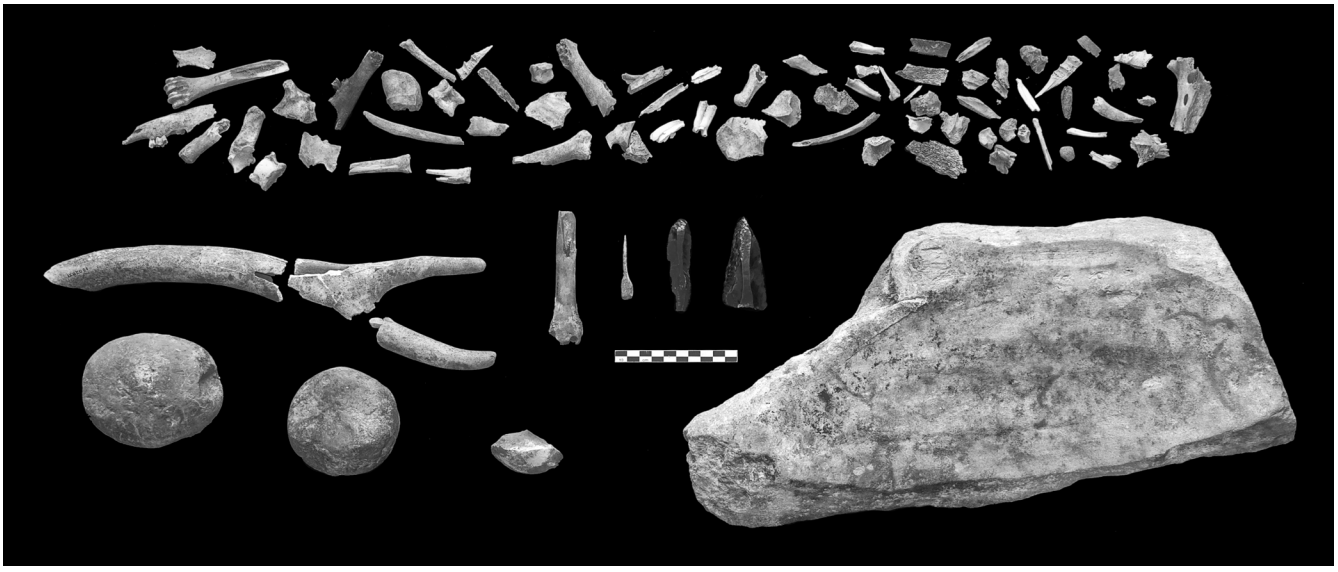

Figure 11.21. *Finds left on the floor at the abandonment of B.45 (Photograph by Jason Quinlan).*

2006). This type of installation has not been identified previously at Çatalhöyük, but Twiss (2006) has suggested that it may have been an architectural installation, a suspended display or a costume element.

On top of the collapse of the bins in the northern end of Sp.238 was a complete equid scapula (10078.x1). Perhaps the scapula had been a scoop used to retrieve the contents of the storage bin and was kept above the bins when not in use and left at the time of the fire. The upper infill deposit (10051) in Sp.238 produced only a few finds; 10051.x2 is a bone point made from a distal sheep/goat metapodial that could not have been in use for a long time as it is made from an unfused bone; the separation of the diaphysis and epiphysis through degradation had occurred only after the artifact had gone out of use. Micro-striations are visible in the polish suggesting that the tool may have been used on thread and linen. Below the lower infill (10051) of Sp.238 was a deposit of burnt mudbrick collapse (10061). Amongst the 19 pieces of obsidian recovered from this is a very finely pressure-flake retouched stemmed projectile 10061.x2 (54mm in length) that was shown by pXRF to be made from Nenezi Dağ obsidian. Given the fresh and near complete state of this piece, it can be argued that this point was deliberately included within this fill as part of the rituals surrounding the closure of this part of the structure (Volume 9 Chapter 21). A further layer of infill (10084) contained a sheep tibia worked into a point that had been heavily worn by handling and had been resharpened.

In Sp.228, on platform F.1410 were a number of finds presumably left as the building went out of use. Southeast of the hearth, a grinding stone 10028.x10 was found *in situ* and its presence limited the erosion of the floor directly underneath. Finds found on the platform and floor surfaces were given the unit number of the building fill (10028) and these were probably left at the abandonment of the building (Fig. 11.21). These include a 77mm long, near complete pressure-flaked blade backed (blunted) on one side, with heavy use-wear from cutting on the opposing margin, plus a large (79mm) broken and used spearhead and/or retouched blade. Both pieces 10028.x8 and 10028.x9 were shown by pXRF to be made of East Göllü Dağ obsidian. Technologically and typologically, the latter piece differs from the B.45 assemblage as it is the result of using a technique dedicated to making large thick blades by percussion and almost certainly represents an import. Perhaps significantly, one other large retouched blade 10042.x2 from this manufacturing tradition was found buried in a special deposit in the packing layer laid down for the construction of a new floor in Sp.228 (see above). A third piece of obsidian 10028.x4 from the group is another point, albeit of very different form to the previous example, being stemmed, complete and measuring 76mm in length (Volume 9 Chapter 21). Additionally, there is a ground stone 10028.x12 and a chisel 10028.x6 made from a sheep/goat tibia with a chipped tip that may have ended the use of the tool. A large 0.4m segment of red deer antler 10028.x1 was also found in the fill immediately above the floor of the building. This is the crown portion of the antler with the two uppermost tines but there is no sign of working. It could, however, be waste from antler working. Also recovered was a split distal metapodial 10028.x5 of a sheep/goat that has a rounded and battered tip and a shaft polished from use, probably on an organic substance. Many of the finds were found close to platform F.1410 possibly indicating a concentration of activity in this area before the abandonment of the building.

Two bone points and a complete metatarsal (10080) could be the remains of a bone-working group found on the northern end of Sp.238 (Fig. 11.22). The bones are charred black

Figure 11.22. *Group of worked bone and possible bone-working material (Photograph by Jason Quinlan).*

from the fire in Sp.238, rather than from a deliberate action to modify the bones. One of the points, 10080.F1, is made from a split and squared distal metapodial of a sheep/goat. The possibility that the bones form a bone-working group is indicated by the fact that the tip had been re-sharpened just before the fire carbonized the bones where they were left. The other bone point, 10080.F2, is a split distal metatarsal of a sheep/goat that is significantly worn, with the tip polished and flattened by use apparently as a leather-working tool (Video 11.1 on CD). All of the tools are well worn, with the exception of the articular end of 10080.F2, which indicates that this part of the tool was probably held in a handle of some kind, protecting it from wear. Above the finds left on the surfaces, the upper infill contained only occasional inclusions and is typical of the clean infill of buildings.

East of the surviving floor surface (10041), a charred timber (10031) measuring 1.06m by 0.1m lay collapsed on an earlier floor surface. This juniper roof timber would have fallen into Sp.238 after the fire (Volume 9 Chapter 7).

Discussion

There are a number of possible scenarios for the sequence of events that led to the abandonment of B.45 and a number of questions that need answering: was the fire in Sp.238 accidental or deliberate? What was the extent of the damage caused by the fire? Was the bucranium placed in Sp.238 before or after the fire? Was part of the building still occupied after the fire?

First, it is evident that the epicenter of the fire occurred in Sp.238 just north of the step in floor level and the intensity of mudbrick burning radiated out from this point. There is no evidence for the cause of the fire but the hearths and oven were located in Sp.228, making an accidental fire less likely although not impossible. Some evidence suggests that the building was being prepared for abandonment and other evidence suggests that some artifacts were still in use when the fire occurred. The fills of the two segments of the bins (F.1426) contained low levels of botanical remains and, in comparison to the general burnt fill of the room, the botanical remains are typical of assemblages found in other Sp.238 deposits. The northern-most bin fill (10088) did contain more grain and phytolith remains than the southern bin but overall the botanical evidence suggests that the bins were empty at the time of the fire, even if they had not been completely scoured clean (Volume 8 Chapter 7). The presence of a bone scoop above the bins, however, implies that some of the items associated with the use of the bins were left in the room before the fire. It is interesting that this scapula "*was placed on top of burnt and demolished bins, but was not itself burnt. This indicates that the placement was part of abandonment behavior following the burning. It recalls similar placements of scapulae (usually cattle) on hearths and floors at abandonment, as was seen in B.1 and B.3*" (Russell *et al.* 2004). A small assemblage of worked bone was found in an artifact group (10080) that includes two points made from sheep/goat metapodial with different degrees of use wear and a complete metatarsal that could have been raw material for manufacturing further tools. All of these bones had been completely charred by the fire in Sp.238 and perhaps represent items in use at the time of the fire. The evidence, therefore, is contradictory in terms of whether the fire was deliberate or accidental. The presence of items on the floors suggests that the building was not cleaned before the fire, but the bins were emptied. There is the possibility that the bins were cleaned out after the fire, the superstructure of the bins demolished and an equid scapula placed over the collapse. If the fire was deliberate, why was the fire not set to burn the whole building rather than just the side room? Furthermore, if the fire began in the side room, it is less likely to have been accidental, as it is away from the cooking installations.

Regarding the second question (what was the extent of the damage caused by the fire?), the fire was intense enough to bake the mudbricks on both the eastern and western sides of the side room. The fire also charred the wooden threshold and support posts in the access-hole but there was no evidence of scorching on the collapsed wall that fell into the open access-hole implying that the collapse did not happen immediately. The extent of the fire damage in Sp.228 was minimal, since none of the platforms or floor surfaces were burnt; the only evidence to suggest fire damage to the structural soundness of the building was a charred timber lying in the middle of the building. This timber lay under the roomfill. It is possible that the timber fell into the room at a later date and initially remained carbonized within the structural element that it formed part of. Two concentrations of bone (10028.x2 and 10028.x7), however, were clustered around the edge of platform F.1411 in the central area of the room and extended spatially towards the burnt timber (10031). Fragments of this bone group adjacent to the timber had been charred, indicat-

ing that a roof timber had caught fire, burnt and dropped to the floor where it continued to smolder. This concentration of bone was presumably left in Sp.228 when the fire started, as were other finds including a fire-cracked stone 10028.x3, perhaps burnt during the fire. The fill (10028) directly above the floor surfaces and platforms contained a high concentration of unusual finds compared to higher levels of the infilling deposit, suggesting that they were either on the floor or fell from the roof as it burned. Although the floor level of Sp.228 was not severely affected by the fire, it seems that the upper level of the building was affected to some degree.

To answer the third question (was the bucranium placed in Sp.238 before or after the fire?), it should be noted that there was no evidence of occupation material above the boar skull and bucranium; the space had filled in with a homogenous ashy-silt fill (10051) which overlapped and lay above the southern edge of the light reddish sand and burnt mudbrick fill (10061) in the northern end of Sp.228. This proves that the infill in the southern part of the space occurred after the infill in the northern part, but it does not demonstrate whether this process occurred immediately afterwards or whether the southern portion remained open for a while, perhaps long enough to see the placement of the bucranium and the boar skull. The collapse of mudbrick into the opening of the access-hole may not have occurred immediately after the fire, thus allowing access from Sp.228. The placement of the bucranium is difficult to interpret but perhaps it was placed in Sp.228 with its plastered horns removed and facing, perhaps incidentally, northwards towards the location of the ignition point of the fire. The wild boar skull was put alongside the bucranium at the same time. Intriguingly, the pillars in Sp.228, at the edge of the north platform, may have originally held a bucranium, as in the example of B.77 (Chapter 23).

Whether parts of the building were occupied after the fire is a difficult question to answer. Parts of the building would still have been inhabitable, but most of the finds seem to have been left just after the fire. A micromorphology sample from the area just beyond the access-hole in Sp.238 was taken and this showed that the "*grasses/reeds were burnt in the entrance to Sp.238, and were covered by plasters and lenses of herbivore/omnivore coprolites and debris, which suggest this area was in use after the fire, during which time a dismantled plastered cattle bucranium and wild boar skull were placed in the south of the adjacent Sp.238, attesting continuing activities and attachment to this building. These end-of-building activities are similar to those at the end of B.1 with evidence, after burning of the buildings, for continued activities in the south of the building, and for ritual practices related to dismantling of molded features and placement of particular objects. They also resemble other buildings such as B.2 for deposition of herbivore and/or omnivore coprolites*" (Volume 9 Chapter 7, PAGE). It therefore seems that there was a significant period of activity in B.45 after the fire related to the abandonment of the structure. This involved the partial replastering of the floor in Sp.238, the placement of the bucranium and boar skull, possibly the emptying of the bins, dismantling the superstructure of the bins and placement of a scapula, which had not been affected by the fire, on top of the broken bins. There is less evidence for post-fire activity in the main room of the building, but the three pits dug into the floor and containing the articulating aurochs bones, two obsidian blades, and two stone grinders and worked sheep/goat metapodial, respectively, may also have been dug during this abandonment phase. In conclusion, there was a significant period of activity in B.45 after the fire and this seems to have related to the abandonment of the structure.

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